

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA



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Order Instituting Rulemaking into Policies to Promote a Partnership Framework between Energy Investor Owned Utilities and the Water Section to Promote Water-Energy Nexus Programs.

Rulemaking 13-12-011  
(Filed December 19, 2013)

**COMMENTS OF THE OFFICE OF RATEPAYER ADVOCATES  
ON THE PROPOSED DECISION REGARDING TOOLS FOR CALCULATING  
THE EMBEDDED ENERGY IN WATER AND AN AVOIDED CAPACITY COST  
ASSOCIATED WITH WATER SAVINGS**

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## I. INTRODUCTION

Pursuant to Rule 14.3 of the California Public Utilities Commission's ("Commission") Rules of Practice and Procedure ("Rules"), the Office of Ratepayer Advocates ("ORA") submits these comments on the Proposed Decision Regarding Tools for Calculating the Embedded Energy in Water and an Avoided Capacity Cost Associated with Water Savings, dated August 17, 2015 ("Proposed Decision"). The Proposed Decision adopts new tools to calculate the embedded energy in water, enabling Energy Investor Owned Utilities (IOUs) to better quantify the net benefits of water-saving programs to energy ratepayers. Adopting the Water-Energy Calculator and the Avoided Water Capacity Cost Model (collectively the "new tools") is a significant step toward facilitating voluntary partnerships between Energy IOUs and Water IOUs and Agencies. ORA has advocated for the development and adoption of these new tools<sup>1</sup> because they will assist Energy IOUs and Water IOUs and Agencies in determining the cost effectiveness and appropriate allocation of project costs for water-energy partnerships.

While adopting the new tools assists and encourages Energy IOUs to develop cost effective water-energy partnerships, there are material errors and omissions in the Proposed Decision that should be addressed before its adoption. ORA's Comments on the Administrative Law Judge's Ruling Seeking Post-Workshop Comments on Tools for Calculating: (1) Embedded Energy in Water and (2) An Avoided Capacity Cost Associated with Water Savings, filed June 10, 2015 ("ORA's Comments on the New Tools") provides a comprehensive analysis of the new tools including shortcomings, recommendations for immediate and future tool updates, and policy recommendations for the adoption of the new tools. ORA's recommendations represent the best path forward for the new tools. These recommendations are not repeated here. Instead, these Opening Comments address issues of material error, critical omissions, and issues needing additional clarification in the Proposed Decision. These are summarized as follows:

- The Proposed Decision mischaracterizes ORA's Comments on the New Tools regarding cost allocation for water-energy partnership programs, and should be corrected to reflect ORA's recommendations.

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<sup>1</sup> In petitioning for the opening of a Water-Energy Nexus rulemaking (Petition 13-05-008, filed May 22, 2013) and in subsequent comments in the rulemaking.

- The Proposed Decision should provide guidance instructing Energy IOUs and Water IOUs to strive to follow the principle that the benefits to each utility's ratepayers should exceed the costs.
- The Proposed Decision states that the new tools allow users to override the resource balance year default value "to account for a particular water supplier's planning, resource, and other needs,"<sup>2</sup> however overriding the default resource balance year is currently blocked in the two calculators, and therefore not operable. This issue should be acknowledged in the findings of fact.
- The Proposed Decision should require Energy IOUs to provide results from the new tools in preparing their requests for ratepayer funding for water-energy projects.
- The Proposed Decision authorizes Water IOUs to use the new tools in connection with requests for ratepayer funding for any water saving measures/programs.<sup>3</sup> The language should be modified to apply exclusively to water-energy partnership programs.
- The Proposed Decision should authorize Water IOUs to submit advice letters for recovery of costs rather than through memorandum accounts.
- The development of pilots on Advanced Meter Infrastructure (AMI) to identify technical issues with a water corporation "piggybacking" on electric and/or gas AMI requires vetting.

Further discussion and recommendations addressing these issues, are presented below. The corresponding recommended changes to the Findings of Fact, the Conclusions of Law, and the Ordering Paragraphs in the Proposed Decision are provided in Attachment 1.

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<sup>2</sup> Proposed Decision at p. 28.

<sup>3</sup> Ibid.

## II. DISCUSSION

### A. **The Proposed Decision Mischaracterizes ORA's Comments on the New Tools Regarding Cost Allocation for Water-Energy Partnership Programs, and Should be Corrected to Reflect ORA's Recommendations.**

The Proposed Decision states “ORA, among others, calls for caps on the absolute level of dollars a PA [Program Administrator] may devote to water-energy programs.”<sup>4</sup> ORA has not called for caps on the absolute level of dollars a PA may devote to water-energy programs. Rather, ORA called for water-energy partnership projects to be cost effective to Energy IOU ratepayers.<sup>5</sup> While in general, individual projects within energy efficiency portfolios are not usually required to be cost effective on a project by project basis, ORA's Comments on the New Tools discusses why an exception should be made for water-energy partnership projects. Perhaps the most critical reason for this exception is that if a water-energy partnership project is not cost effective to the Energy IOU (i.e. the Energy IOU is providing more funding to the partnership than the project's associated energy-side benefits,) the Energy IOU ratepayers are effectively providing a subsidy to the Water Agency and its customers.<sup>6</sup> Cross-subsidization from one utility to another is not just and reasonable, and is therefore contrary to the policy objectives of PU Code section 451.<sup>7</sup>

As discussed in further detail below, to prevent this cross-subsidization, guidance should be provided to ensure that water-energy partnership projects are cost effective for Energy IOU

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<sup>4</sup> Proposed Decision at p. 58.

<sup>5</sup> ORA's Comments on the New Tools state at p. 4: “The Commission should require that Water-Energy partnership projects be cost effective to Energy IOU ratepayers on a project by project basis.”

<sup>6</sup> As stated in ORA's Comments on the New Tools at p. 6: “When discussing cost allocation and cost effectiveness for Water-Energy partnership projects, it is important to remember that while most residents of California are both water and energy ratepayers, the service territories for water and energy vary greatly. When an Energy IOU partners with a specific Water Agency for a given project, all Energy IOU ratepayers are helping to fund that project, but only the ratepayers of that one specific Water Agency experience the water-side benefits of the project. Therefore, it is critical that all Water Energy partnership projects provide energy savings such that the benefits to Energy IOU ratepayers are greater than or roughly equal to the costs to those same Energy IOU ratepayers, and that those savings are quantified as accurately as possible.”

<sup>7</sup> Cross-subsidization of rates occurs when benefits enjoyed by one group, such as a customer class, are funded by another group. Cross-subsidization of rates is in conflict with section 451 because it is unjust for ratepayers to pay for costs for which they did not receive the benefit.

and Water IOU ratepayers. Additionally, the Proposed Decision should be modified at p. 60 to reflect ORA's actual recommendations.

**B. The Proposed Decision Should Provide Guidance Instructing Energy IOUs and Water IOUs to Strive to Follow the Principle that the Benefits to Each Utility's Ratepayers Should Exceed the Costs.**

As acknowledged in the Proposed Decision, “[a] primary purpose of this rulemaking is ‘to explore . . . how the costs of [water-energy] programs should be allocated among participants.’”<sup>8</sup> One of the key specific issues included in the Scope of this proceeding is determining “[t]he appropriate methodology for allocating water-energy program costs.”<sup>9</sup>

As part of this proceeding, a workshop was held on cost allocation issues<sup>10</sup> where allocation of project costs among partnering entities was discussed. The Proposed Decision's intent is to rule on cost allocation, stating “[w]e also address how to allocate program costs and benefits among program administrators (PAs) for purposes of determining cost effectiveness for each PA.”<sup>11</sup>

The Proposed Decision includes a section on cost allocation,<sup>12</sup> providing a detailed description of many issues that require resolution in order to input the results of the new tools into the existing energy efficiency, cost effectiveness model used to estimate portfolio cost effectiveness. The discussion includes a section titled “What Percentage of Costs Should We Allocate to Energy and Water Utilities, Respectively?”<sup>13</sup> which discusses the allocation of the “participant cost,” dubbed *e* in the discussion. However, the Proposed Decision does not provide guidance regarding the allocation of full project costs (i.e. how much each partnering entity contributes towards incentive costs, administrative costs, and any other potential project costs.) In the cost allocation discussion, the Proposed Decision only addresses the issue of cost

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<sup>8</sup> Proposed Decision at p. 51, quoting R.13-12-011, at p. 2.

<sup>9</sup> R.13-12-011, Assigned Commissioners Amended Scoping Memorandum and Ruling, April 27, 2015, at p. 9.

<sup>10</sup> As noted in the Proposed Decision at p. 12.

<sup>11</sup> Proposed Decision at p. 4.

<sup>12</sup> Section 4.4 from p. 47 – p. 61.

<sup>13</sup> Section 4.4.3.2 at p. 55.

allocation among partnering entities by stating “[w]e are not being prescriptive about how tool outputs relate to Commission-jurisdictional utility spending decisions.”<sup>14</sup> Given that a primary purpose of this rulemaking is to determine how program costs should be allocated among participants and the lengthy discussion of cost allocation in this Proposed Decision, the Commission should give guidance to Commission-jurisdictional utilities regarding the distribution of program and project costs among partnering entities.

As written, the Proposed Decision would allow an Energy IOUs and Water IOUs to spend funds collected from its own ratepayers to support a partnership with a Water Agency that provides no positive net benefit to its energy ratepayers and only provides positive net benefit to the Water Agency. As stated earlier, cross-subsidization is contrary to the policy objectives of Public Utilities Code Section 451. Similarly, a Water IOU would be permitted to spend funds collected from its own ratepayers to support a partnership with an Energy IOU that provides no positive net benefit to its water ratepayers and only provides net positive benefit to the Energy IOU. This too conflicts with Public Utilities Code Section 451. The Proposed Decision states:

“[t]he ultimate brake on excessive energy utility contribution to water programs is energy efficiency portfolio TRC [Total Resource Cost]” which “constrains their ability to funnel large amounts of energy efficiency money into water-energy nexus measures and programs that are not cost effective.”<sup>15</sup>

Continuing to constrain energy efficiency portfolio TRC values does not adequately address the need for cost effectiveness of water-energy partnerships projects for two primary reasons:

1) As discussed above, as well as in ORA’s Comments on the New Tools, water-energy partnership projects that are pursued, but are not cost effective to Energy IOUs, amount to a cross-subsidy from the energy utility to the water utility (and vice-versa for projects not cost effective to Water IOUs); and

2) The TRC equation does not account for incentive costs,<sup>16</sup> and therefore does not provide an accurate picture of cost effectiveness for water-energy partnership projects. For non-partnership projects, the incentive cost is an equal “cost” to the utility and a “benefit” to the

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<sup>14</sup> Proposed Decision at p. 51.

<sup>15</sup> Proposed Decision at p. 58.

<sup>16</sup> Shown at p. 54 of the Proposed Decision.

participating customer, and is therefore not considered in the TRC, as the two cancel each other out. However, in a partnership project, the customer incentive cost to the Energy IOU need not be the same as the benefit to the Energy IOU ratepayer, and this is not captured in the TRC. This can be seen clearly in the hypothetical toilet example provided in the Proposed Decision.<sup>17</sup> In this example, the total incentive cost is \$250, which has been hypothetically divided between the Water Agency and the Energy IOU at a ratio of 4:1. However, “[t]he relative benefits of the hypothetical toilet program...run 9:1 in favor of the water utility.”<sup>18</sup> Therefore, the incentive cost to the Energy IOU ratepayers is \$50, but the incentive benefit to the Energy IOU ratepayers is approximately \$30 (1/9 of the total \$250 incentive). This discrepancy is not captured in the TRC test, but is captured in the PAC test. As can be seen in the boxed calculation of the Energy IOU TRC and PAC values in the example in the Proposed Decision, the PAC values are lower than the TRC values.<sup>19</sup> This, despite that fact that in non-partnership projects, the “PAC tends to be higher than TRC.”<sup>20</sup> In this hypothetical example, the total benefits of the project far exceed the total costs, therefore both the TRC and the PAC are above 1.0, despite the disproportional division of the incentive cost. However, if the Energy IOU in this example hypothetically put \$200 towards the cost of this \$250 incentive that has a 9:1 water-side benefit, the Energy IOU TRC would remain the same as shown in the existing example (1.91, making the program appear extremely cost effective) and only the Energy IOU PAC would change to reflect this disproportional cost (0.54,<sup>21</sup> showing that the program is not actually cost effective to Energy IOU ratepayers). Because of this nuance for partnership projects, the TRC does not provide an accurate picture of cost effectiveness, and should not be looked to as a “brake” on cost effectiveness.

Guidance on project cost allocation should be provided to Energy IOUs *beyond* the requirements related to the overall energy efficiency portfolio’s TRC. ORA’s Comments on the

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<sup>17</sup> Proposed Decision at p. 54.

<sup>18</sup> Proposed Decision at p. 56.

<sup>19</sup> Proposed Decision at p. 54.

<sup>20</sup> Proposed Decision at p. 49.

<sup>21</sup> \$113 benefit/(\$200 incentive + \$10 admin).

New Tools provide a detailed account of the best way to provide this guidance.<sup>22</sup> However, at a minimum, the Energy IOUs and Water IOUs should be directed to strive to follow the basic principle that for any given water-energy partnership project, the benefits to each participating utility's ratepayers should exceed the costs.<sup>23</sup> Attachment 1 provides recommended language for the Ordering Paragraphs of the Proposed Decision.

**C. The Proposed Decision States That The New Tools Allow Users To Override The Resource Balance Year Default Value, However, User Change To The Resource Balance Year Is Currently Blocked In The Two Calculators, And Therefore Not Operable. This Issue Should Be Acknowledged In The Findings Of Fact.**

“The W-E calculator contains a default assumption that 2016 will be the “resource balance year” -- the year in which additional water capacity is needed.”<sup>24</sup> The Proposed Decision states “users can override the default choice of resource balance year default to account for a particular water supplier’s planning, resource, and other needs.”<sup>25</sup> The default override in the two models for resource balance year are not currently functional. As suggested in detail in ORA’s Comments on the New Tools,<sup>26</sup> the new tools should allow users to override the default value for the resource balance year, which should then result in a corresponding change in the new tool outputs. In the new tools, the resource balance year is currently a set-value, not available for user-override.<sup>27</sup>

As such, ORA recommends the following:

- The Findings of Fact in Proposed Decision should be clarified to reflect that users cannot override the default value for the resource balance year in the current version of the new tools. Attachment 1 provides recommended language for including this issue in the Findings of Fact.

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<sup>22</sup> ORA’s Comments on New Tools, pp. 4 - 10.

<sup>23</sup> As measured by the PAC test. Additionally, as discussed in ORA’s Comments on the New Tools on p. 11, net-to-gross (NTG) ratios should be applied before determining cost effectiveness of Water-Energy partnership projects.

<sup>24</sup> Proposed Decision at p. 27.

<sup>25</sup> Proposed Decision at p. 28.

<sup>26</sup> ORA’s Comments on New Tools, pp. 1-3.

<sup>27</sup> See Water-Energy Calculator Version 1.04; Avoided Water Capacity Cost Model Version 1.03.

- The resource balance year should be made a functional field, capable of override, in the near future. Attachment 1 provides recommended language for including this issue in the responsibilities delegated to Commission Staff (with consultant support) in Ordering Paragraph 4.

**D. The Proposed Decision Should Require Energy IOUs to Provide Results From the New Tools in Preparing Their Requests for Ratepayer Funding for Water-Energy Projects.**

The Proposed Decision states “[e]valuation of existing or new water energy programs will be conducted by the Commission, and included and prioritized in the next update to the energy efficiency master joint evaluation, measurement, and verification (EM&V) plan.”<sup>28</sup> Prioritizing EM&V for the new tools is a critical part of ensuring that the new tools are accounting for embedded energy in water as accurately as possible.

The Proposed Decision only requires the Energy IOUs to submit the calculator runs of the new tools to the Commission if there are user-overrides to the tool defaults. No submission is required if the tool defaults are used. Attachment 1 provides recommended changes to Ordering Paragraph 2 to clarify that Energy IOUs should provide all results from use of the new tools in preparing their requests for ratepayer funding for measures/programs that reduce water use and save embedded energy. To facilitate the development of best practices and a better understanding of tool use for all stakeholders, the Commission should hold a workshop twelve months after issuance of the decision in order to share and develop best practices for tool use and output submittal. Creating these best practices for the new tool use will ultimately enhance the EM&V process for water-energy projects.

**E. The Proposed Decision Authorizes Water IOUs to Use the New Tools in Connection With Requests for Ratepayer Funding for Any Water Saving Measures/Programs. The Language Should be Modified to Apply Exclusively to Water-Energy Partnership Programs.**

Ordering Paragraph 1 of the Proposed Decision states “Commission-jurisdictional water utilities may use the Water-Energy Calculator and the Avoided Water Capacity Cost Model in connection with requests for ratepayer funding for any water saving measures/programs.” While certain generalized assumptions need to be made to move forward with water-energy partnership

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<sup>28</sup> Proposed Decision at p. 71.

projects, Water IOU requests for ratepayer funding for water saving measures and programs are evaluated on a case-by-case basis for each Water IOU in their General Rate Cases. This evaluation is dependent on the unique supply and demand characteristics of each district and considers, at a minimum, the conservation and efficiency measures in the Minimum Data Requirements<sup>29</sup> and the Water Conservation Act of 2009 (SB X7-7). As stated in the Proposed Decision, the Avoided Water Capacity Cost Model “makes compromises around spatial and temporal resolution/granularity. The water tool simplifies where necessary to make the analysis tractable.” While this simplification may be necessary for water-energy joint partnership projects, the same simplifications are not necessary for all Water IOU ratepayer funding water conservation programs. For example, in the existing water tool, the resource balance year is currently fixed at 2016, meaning that the extrinsic marginal supply would be needed immediately. This is not necessarily reflective of the current situation need for all Water IOUs. This misrepresentation would make many water conservation programs appear cost effective to a Water IOU which may not actually be cost effective when scrutinized on a more detailed basis (as is regularly done in conjunction with Water IOU requests for ratepayer funding for water conservation measures).

In general, the Water Avoided Costs defaults need additional refinement, the specifics of which are discussed in ORA’s Comments on the New Tools. This tool is not yet at the level of refinement necessary to be used for decision making or cost allocation purposes in relation to Water IOUs. Therefore, until further refinements are made, the Water Avoided Costs Tool should be used exclusively for the purpose of informing cost allocation negotiations for Water Energy partnership projects.

The language in the Proposed Decision should be modified to authorize Water IOUs to use the new tools *only* in connection with requests for ratepayer funding for any joint water-energy partnership measures/programs. Attachment 1 provides recommended language for the Ordering Paragraph.

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<sup>29</sup> Decision 07-05-062, Appendix A, Attachment 1, Section F.

**F. The Proposed Decision Should Authorize Water IOUs to Submit Advice Letters for Recovery of Costs Rather Than Though Memorandum Accounts.**

The Proposed Decision states “[w]ater utilities have expressed concern about their ability to fund water- energy nexus measures without waiting for their next General Rate Case (GRC). They have asked for a mechanism for cost recovery in the interim.”<sup>30</sup> To resolve this issue, the Proposed Decision authorizes Water IOUs “to establish memorandum accounts to record expenses incurred for water-energy nexus projects through a Tier 1 advice letter filing.”

While the authorization to establish a memorandum account does provide a mechanism for cost recovery, it is unnecessary and duplicative to both authorize a memorandum account and to authorize recovery of expenses through a Tier 3 advice letter. Additionally, costs booked to memorandum accounts do not provide guaranteed recovery, and risk-averse Water IOUs may be reluctant to commit to water-energy partnership projects without additional assurance that the costs will be recovered. This could unnecessarily stall water-energy partnership projects.

The Proposed Decision should adopt CWA and ORA’s recommendations to authorize Water IOUs to submit advice letters for recovery of costs (ORA is recommending a Tier 3 whereas CWA recommends a Tier 2 advice letter).<sup>31</sup>

Attachment 1 provides recommended language for the Ordering Paragraph.

**G. The Development of Pilots on Advanced Meter Infrastructure (AMI) to Identify Technical Issues With a Water Corporation “Piggybacking” on Electric and/or Gas AMI Requires Vetting.**

This proceeding has not yet provided a forum for parties to provide input on advanced metering infrastructure (AMI) installations for water utilities in any significant way. CWA asks in its Comments on the New Tools that “the Commission add the approval of [AMI] installations to the scope of the water-energy nexus proceeding.”<sup>32</sup> However, the Proposed Decision directs Energy IOUs, in conjunction with CWA, to work with Commission staff, and within 90 days of the mailing date of the decision, to jointly file a Tier 2 Advice Letter for one or more pilots on

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<sup>30</sup> Proposed Decision at p. 60.

<sup>31</sup> ORA’s Comments on the New Tools provides more specific recommendations and explanations at p. 17.

<sup>32</sup> Comments of California Water Association on Navigant’s Revised Final Report, The Cost-Effectiveness Calculator, and Water-Energy Nexus Cost Allocation Issues, 6/10/15, p. 2.

Advanced Meter Infrastructure (AMI).<sup>33</sup> “The goal for the pilot(s) shall be identifying technical issues with a water corporation “piggybacking” on electric corporation and/or gas corporation AMI infrastructure.”<sup>34</sup> The Commission has approved smart meters for Water IOUs in the past,<sup>35</sup> and has the opportunity to approve additional smart meters in Joint Settlement Agreement filings that have been submitted to the Commission for approval.<sup>36</sup> Additionally, California American Water (“Cal Am”) is currently running a program piloting AMI meters that piggyback on existing PG&E infrastructure in its Monterey District. Cal Am is using funds in its meter replacement budget approved by the Commission in its latest GRC.<sup>37</sup> Cal Am anticipates that the pilot will be complete in October, and plans to hold focus groups at that time with pilot program participants to help assess the effectiveness of the program.

It is premature to require the Energy IOUs and CWA to develop pilot programs immediately, and in this rulemaking. ORA recommends that the PD direct the Energy IOUs to provide an informational filing with their ideas on how to proceed on this issue, including anticipated timelines and costs. If the advice letters requesting pilot programs are authorized even though ORA recommends against it, they should be Tier 3 advice letters to ensure the proposals are considered in a resolution since they are new proposals that could result in rate increases to customers.

Attachment 1 provides recommended language for Ordering Paragraph 9 related to AMI pilots.

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<sup>33</sup> Proposed Decision at p. 72.

<sup>34</sup> Ibid.

<sup>35</sup> The Commission approved an AMR pilot project for Cal Water in the Dominguez District in D.14-08-011. Cal Water’s current GRC application, A.15-07-015, provides testimony with updated information regarding the AMR pilot, and reports that the AMR Pilot Project is projected to be complete by the scheduled project end date of 12/31/2016, and to be on budget.

<sup>36</sup> San Jose Water Company and ORA have included an AMI pilot project in the Proposed Settlement Agreement for A.15-01-002, the San Jose Water current GRC. The Motion for Joint Settlement Agreement was filed 7/24/15, and the Motion for Joint Approval of the Supplemental Settlement Agreement was filed 8/13/15. Both are still being considered by the Commission.

<sup>37</sup> A.13-07-002.

### III. CONCLUSION

The changes recommended herein will clarify and strengthen the Proposed Decision, as well as ensure that the water and energy ratepayer dollars spent on conservation and efficiency programs are utilized efficiently and effectively.

Respectfully submitted,

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